

under. The colour of the hair is rather lighter than in the Sambur; the ears are not so large. The does breed freely every year with us. We have liberated some in the bush, and given others away."

Mr. Selater exhibited the horn in question, and said that it appeared to belong to *Cervus rusa*, originally of Java, but which was known to have been introduced thence into the Mauritius many years ago (see Blyth, *Ibis* 1862, p. 92).

Mr. Selater thought it desirable that the facts of this transportation should be placed upon record, as this Deer might probably become a denizen of Australia, as had been already the case in Mauritius.

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The following papers were read :—

1. On the Position of the Anterior Nasal Apertures in  
*Lepidosiren*. By T. H. HUXLEY, Sec. R.S.

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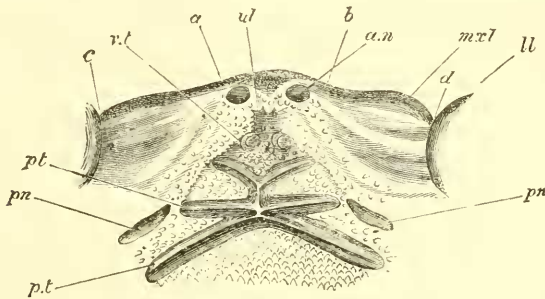
In the course of the discussion which followed my paper on *Ceratodus*, read before the Society on the 4th of January, reference was made to the position of the anterior nasal apertures in *Lepidosiren*; and they were affirmed to be within the mouth, inasmuch as they are situated between the upper and the lower lips.

The anterior nasal apertures correspond with the primitive openings of the olfactory sacs, which, in all known Vertebrata, are invariably developed from the integument of the under aspect of the head, in front of the region which forms the roof of the oral cavity: and, in all the vertebrated animals in which I had specially studied the question, I had found the anterior nasal apertures to be situated in front of the upper lip and therefore outside the mouth. That they should be situated behind, or below, the upper lip, and therefore inside the mouth (so far as the cavity included between the lips may be properly called the mouth), appeared to me to be a singular anomaly, the existence of which, however, I was not prepared to dispute without reexamination of the facts. The point is, in various respects, of so much interest that I have lost no time in making the requisite investigation, with the result of leaving no doubt whatever in my mind that in *Lepidosiren*, as in *Ceratodus*, the anterior nasal apertures are truly outside the mouth, not only in the sense of lying beyond the contour of the mandible, when this is shut against the palate, but in the sense of being situated on the underside of the head in front of the upper lip, and therefore altogether beyond the limits of any permissible definition of the oral cavity.

When the mouth of a *Lepidosiren* (*L. annectens*) is laid open from below, and the palate and the contour of what has hitherto been termed the upper lip (Fig. p. 181, *c a b d*) are displayed, the latter is seen to present a median portion (*a b*) separated by a slight undulation from the two lateral prolongations *c a* and *b d*. The

latter are the edges of the fold which overhang the mandible on each side when the parts are undisturbed. They occupy the maxillary region of the head, and may be termed the *maxillary lips*.

The median portion of the anterior contour (*a b*) does not belong to the lips at all, but corresponds, as is easily seen in a section of the skull, with the anterior extremity of the chondrocranium and the ventral edges of the nasal capsules. The line *a b* is, in fact, the anterior contour of the head; and the pigment-cells of the dorsal integument are here continued onto the ventral face. After a very short distance, however, the integument terminates in a slight, transverse, papillose ridge, which forms the anterior boundary of a shallow median depression; on each side of the hinder part of this depression is one of the vomerine teeth (*v.t.*).



Under view of the fore part of the roof of the mouth and underside of the head of a young specimen of *Lepidosiren annectens* ( $\times 3$ ). *a b*, anterior margin of the head; *a.c.*, *b.d.*, right and left maxillary lips; *a.n.*, anterior nasal apertures; *p.n.*, posterior nasal apertures; *u.l.*, premaxillary lip; *v.t.*, vomerine teeth; *p.t.*, palatine teeth.

The anterior nares (*a.n.*) lie immediately behind the anterior contour of the head; and their more prominent posterior lips lie in front of a transverse line drawn through the edge of the papillose ridge. It is obvious that the area included between the anterior contour of the head in front, the median fossa behind, and the anterior nares at the sides, corresponds with the region occupied by the naso-frontal process in the vertebrate embryo and with the homologous large, shield-shaped, naso-frontal integumentary plate in the Rays and Dogfishes. The papillose ridge (*u.l.*) is therefore the middle or premaxillary portion of the upper lip; and if this be so, it follows that the anterior nares in *Lepidosiren* are placed as in Chimæroids and Plagiostomi, on the under aspect of the head and outside the mouth.

I may add that *Lepidosiren* has two upper labial cartilages—one fibro-cartilaginous immediately behind the anterior nasal aperture, and the other behind the posterior nasal aperture. These answer to the upper labial cartilages in *Chimæra* and *Cestracion*.